IN THE CLAIMS:

1. A method of fabricating microkeratome blades from a stock strip of metal comprising the steps of:

sharpening one longitudinal edge of the strip to form an anterior linear cutting edge having beveled sides converging to a cutting edge tip;

severing the strip transversely into blade blanks while preserving the cutting edges;

securing a stack of the severed strips with the cutting edges in alignment with a reference plane;

electric discharge machining the blade blanks to form curved posterior walls extending substantially continuously between the opposite ends of the cutting edges, the machining also forming an interior aperture in each blade blank that extends outwardly through the posterior edge via a small slot, thus defining microkeratome blades which are of desired overall geometry;

separating the blades into individual units; and

finishing the microkeratome blades by lapping the blade bodies to remove burrs and introduce radial curvatures in the posterior boundary edges while preserving the cutting edges.

2. The method of fabricating microkeratome blades as set forth in claim 1 above, wherein the metal strip is of stainless steel and about 0.01" in thickness, wherein the severing step forms blade blanks in multiples of 0.400" to 0.500" in width, and wherein the finishing step comprises progressive and substantially continuous removal of

boundary edge discontinuities in the posterior boundary from one corner of the cutting edge to the other.

3. A method as set forth in claim 2 above wherein the electric discharge machining step comprises forming, in each blade, a single interior aperture centrally placed in the body relative to the length of the cutting edge, and single slots from the apertures centrally through the rear edges, and wherein the finishing step further includes inspecting and cleaning the individual blades.

4. A method as set forth in claim 1 above, wherein the electric discharge machining step includes forming a small geometric indicia in the slot to identify the blade type.

5. A microkeratome blade for keratomileusis incisions comprising:

a planar metal body of about 0.01" thickness and a linear cutting edge of about 0.45" to 0.525" length that is tapered on both sides to a cutting edge tip, the cutting edge corners being radiused and the body having a curvilinear posterior edge from corner to corner with a radius in the approximate range of 0.15" to 0.25", and the body including at least one aperture in a central region relative to the cutting edge length, the cutting edge tip deviating less than 0.0002" from the nominal plane of the body and the corners and rear edge of the blade being free of outward deviations of more than 0.0001" from the planar surfaces of the body, and

a blade driver/holder having a planar seating surface engaged to one surface of the blade encompassing the at least one aperture, and at least one boss extending from the seating surface and mating with the at least one aperture, the

driver/holder including a drive surface for use in imparting a reciprocating blade motion.

6. A blade as set forth in claim 5 above, wherein the body is of stainless steel and the taper has a depth of about 0.050" from the cutting edge tip, including a terminal depth of greater convergence at the very tip over a length of about 0.0015", and wherein the maximum deviation of the planar surfaces of the opposite sides of the body is less than 0.0001" from the nominal.

(7.) A microkeratome blade for keratomileusis incisions, comprising:

a planar stainless steel, blade body of about 0.01" thickness having a linear cutting leading edge portion with about 0.450" to 0.525" length that is tapered toward the edge tip, the tapered length being defined by converging surfaces on each side, the converging surfaces having sharper converging angles proximate the edge tip for a length of about 0.0015", the body having a curved rear edge wall extending continuously from the corners of the leading edge portion and defining a generally convexly curved rear periphery, the body further including at least one blade holder – receiving aperture in the region between the leading edge portion and the rear edge, and

a blade holder coupled to the body at the holder receiving aperture, the holder including a base surface engaging the planar body surface about the at least one aperture, and having at least one boss matingly seated in the at least one aperture and a dimension transverse to the thickness of the blade body sufficient to extend through the blade body, the holder including a substantially planar drive surface apart from the base surface and angled relative to the base surface in a

direction diverging from the rear wall of the body, with the drive surface including a drive groove transverse to the leading edge of the body.

8. A blade as set forth in claim 7 above, wherein the body has a substantially uniform curvilinear rear edge such that internal reflections of vibratory energy during reciprocating motion parallel to the cutting edge are diffuse and non-resonant, such that the precise linearity of the cutting edge tip is preserved.

9. A microkeratome blade for tangential corneal incision with a reciprocating motion comprising:

a cutting blade having a thin planar body with an anterior linear boundary beveled to a leading edge cutting tip, the anterior boundary including end corners at the limits thereof; and

the cutting blade also including a substantially continuous curvilinear posterior boundary extending from one of the anterior boundaries to the other in a generally hemispherical form, with the blade body also being formed to include an interior aperture that is adjacent the posterior boundary and elongated in a direction parallel to the anterior boundary.

10. A blade as set forth in claim 9 above, wherein the blade body includes a slot at a central posterior position opening to the interior aperture.

11. A blade as set forth in claim 9 above further including a blade holder having a blade engaging surface including a boss extending therefrom and configured to mate within the holder retaining aperture.

12. A blade as set forth in claim 11 above, wherein the blade is of stainless steel and about 0.01" thick and the anterior boundary is in the range of 0.450" to 0.525" long, the

maximum anterior to posterior dimension is in the range of 0.300 to 0.400" deep, and the bevel at the anterior boundary is angled to extend about 0.050" deep.